DoD Business Transformation

Meeting the Security Challenges of the 21ST century

Understanding the 5000 series

Defense Acquisition University

Professor John Driessnack

john.driessnack@dau.mil

Acquisition Decision Support Systems In Transformation

Revolutionary

CJCS 3170.01C 24 June 03

Joint Capabilities Integration & Development System (JCIDS)

VCJCS/Service Chief Oversight

MID 913 PPBS to PPB 22 May 03

Evolutionary

Defense Acquisition System

Milestone Decision Authority (MDA) Oversight

Planning, Programming, Budgeting & Execution Process (PPBE)

DEPSECDEF Oversight

Emerging

DoD 5000 Series 12 May 03 Revision

Previous Requirements, Acquisition, and Planning, Programming & Budgeting Process

Requirements

- **Service, not Joint focused**
- **Joint warfighting needs not prioritized**
- **Systems not necessarily integrated**
- **Duplication existed, particularly in smaller programs**
- **Evolutionary Acquisition not well institutionalized**
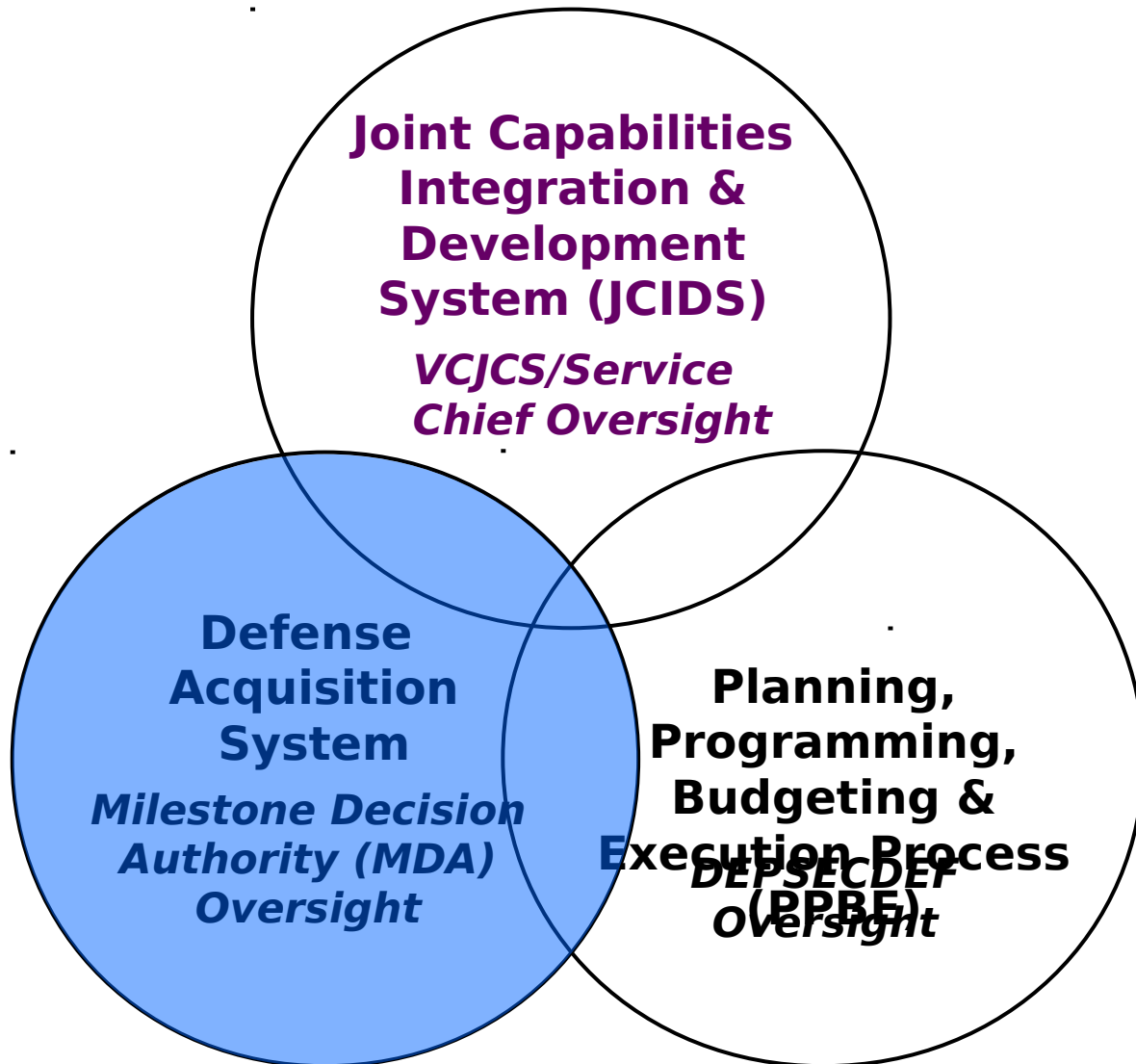
Acquisition

- **Policies overly prescriptive**
- **Acquisition environment did not foster efficiency, creativity and innovation**
- **Evolutionary Acquisition not well institutionalized**

PPBS

- **Strategic planning process did not drive identification of needs for military capabilities**
- **Imposed fiscal discipline but did not integrate strategy into a coherent defense program**

3

Acquisition Decision Support Systems In Transformation

Joint Capabilities Integration & Development System (JCIDS)

VCJCS/Service Chief Oversight

Defense Acquisition System

Milestone Decision Authority (MDA) Oversight

Planning, Programming, Budgeting & Execution Process (PPBE)

DEPSECDEF Oversight

5

Evolution of Defense Acquisition Policy

- **1969 - DSARC established by DEPSECDEF Packard.**
- **1971 - DoD Directive 5000.1, "Acquisition of Major Defense Systems".**
- **1975 - DoD Instruction 5000.2, "Decision Coordinating Paper and the DSARC".**
- **1976 - OMB Circular A-109, "Major System Acquisitions"**
- **1977 - DoDD/DoDI 5000.1/2 revised to incl. OMB Cir A-109. DoDI 5000.2 becomes "Major Systems Acquisition Process", implements 5000.1.**
- **1987 - Policies and procedures extended to "nonmajor" acquisition programs.**
- **1991 - DoD 5000.2-M issued with detailed formats for all documents. 5000.1/2 expanded to absorb over 60 other directives, instructions, and memoranda.**
- **1996 - DoD 5000.1 applies to all programs. DoDI 5000.2 replaced with DoD Regulation 5000.2, applies to major programs (mostly). DoD 5000.2-M eliminated. Major AIS programs included. Deskbook created. Components "empowered" for nonmajor programs.**
- **2000 - DoDI 5000.2 returns, implements revised DoDD 5000.1-both apply to all programs. Milestones/phases restructured. S&T**

The 5000 Process: 1996 – 2000 - 2003

1996

0	I	II	III

| Determination of Mission Need | CONCEPT EXPLORATION | PROGRAM DEFINITION & RISK REDUCTION | ENGINEERING & MANUFACTURING DEVELOPMENT | PRODUCTION, FIELDING/ DEPLOYMENT, & OPERATIONAL SUPPORT | Demilitarization & Disposal |

2000

User Needs & Technology Opportunities

A	B	C

| CONCEPT & TECHNOLOGY DEVELOPMENT | SYSTEM & DEMONSTRATION | DEVELOPMENT | PRODUCTION & DEPLOYMENT | OPERATIONS & SUPPORT |

◇ Decision Review

◇ Interim Progress Review

◇ FRP Decision Review

2003

User Needs & Technology Opportunities

A	B	C

| CONCEPT REFINEMENT | TECHNOLOGY DEVELOPMENT | SYSTEM DEVELOPMENT & DEMONSTRATION | PRODUCTION & DEPLOYMENT | OPERATIONS & SUPPORT |

◇ Concept Decision

◇ Design Readiness Review

◇ FRP Decision Review

Streamlined Policy

- DoD Directive 5000.1
  - Principles retained; innovation/flexibility emphasized

- DoD Instruction 5000.2
  - Detailed discussion of acquisition model
  - Focused on required outcomes and statutory requirements

- DoD Acquisition Guidebook
  - Canceled DoD Regulation 5000.2; characterized as non-mandatory
  - Content will be:
    - Expectations (TEMP, C4ISP, etc.)
    - Best Practices
    - Lessons Learned
  - Guidance on practice and procedure
  - Information retained; available to workforce on Internet
  - Revision underway

Revised Policy Objectives

- **Streamline**
- **Increase Flexibility**
- **Enhance Business Practice**
- **Emphasize Evolutionary Acquisition**
- **Integrate Acquisition Business Model with transformed Requirements Generation System**
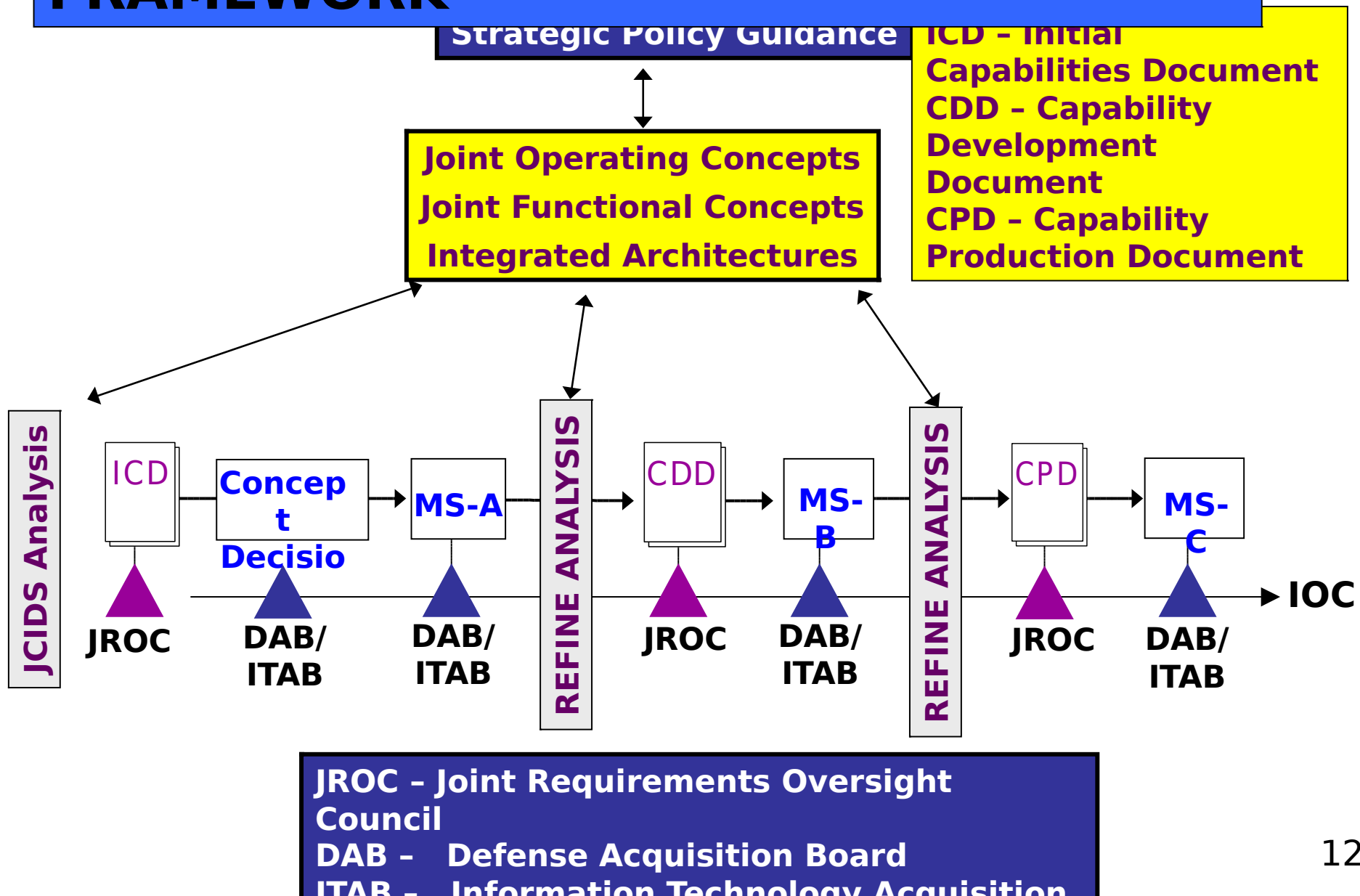
Increased Flexibility

- **PM determines what information is required to satisfy regulatory requirements**

- **MDA may tailor (with some exceptions) regulatory information requirements**

- **MDA resolves issues regarding Guidebook expectations**

The Opportunity to Be Innovative

10

Enhanced Business Practice

- **Institutionalized *Acquisition of Services Policy***

- ***Streamlined* Clinger-Cohen Act Compliance Procedure**

- **Improved Oversight of *Financial Management Information Systems* (and related systems)**

- **Increased Emphasis on *Supportability***
  - **Human Systems Integration, Information Assurance, Sustainment, Anti-Tamper, Spectrum Certification, etc.**

- ***Design Readiness Review* to assess progress during the System Development and Demonstration Phase**

- **SAE determination of *Operational Test Readiness***

JCIDS TIES TO THE DEFENSE FRAMEWORK

Strategic Policy Guidance

Joint Operating Concepts
Joint Functional Concepts
Integrated Architectures

ICD – Initial Capabilities Document
CDD – Capability Development Document
CPD – Capability Production Document

JCIDS Analysis

ICD

Concept Decisio

MS-A

REFINE ANALYSIS

CDD

MS-B

REFINE ANALYSIS

CPD

MS-C

IOC

JROC   **DAB/ITAB**   **DAB/ITAB**   **JROC**   **DAB/ITAB**   **JROC**   **DAB/ITAB**

JROC – Joint Requirements Oversight Council
DAB – Defense Acquisition Board
ITAB – Information Technology Acquisition

12

Evolutionary Acquisition

- Two development processes to implement Evolutionary Acquisition Strategy
  - Incremental Development: End-state requirement is known, and requirement will be met over time in several increments
  - Spiral Development: Desired capability is identified, but end-state requirements are not known at Program Initiation. Requirements for future increments dependent upon technology maturation and user feedback from initial increments
- Evolutionary acquisition strategies shall be preferred approach to satisfying operational needs.
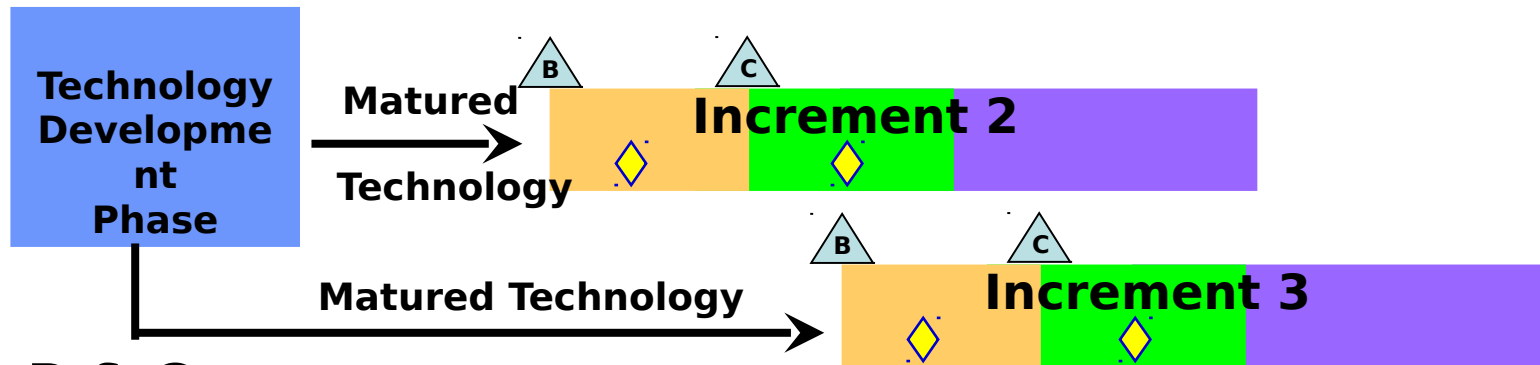- Spiral development shall be the preferred process.

Evolutionary Approach

CR	TD	SDD	PD	OS

A   B   C

Increment 2

B   C

Increment 3

B   C
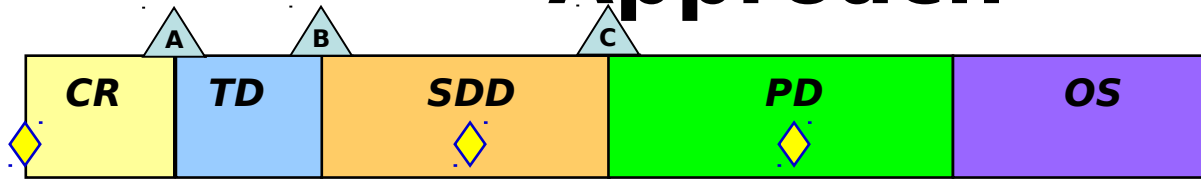
Key Enablers

- **Time-Phased Requirements**
- **A Modular Open Systems Approach to facilitate Technology Insertion**
- **Evolutionary Sustainment Strategies**
- **T&E Consistent with Evolutionary Approach**
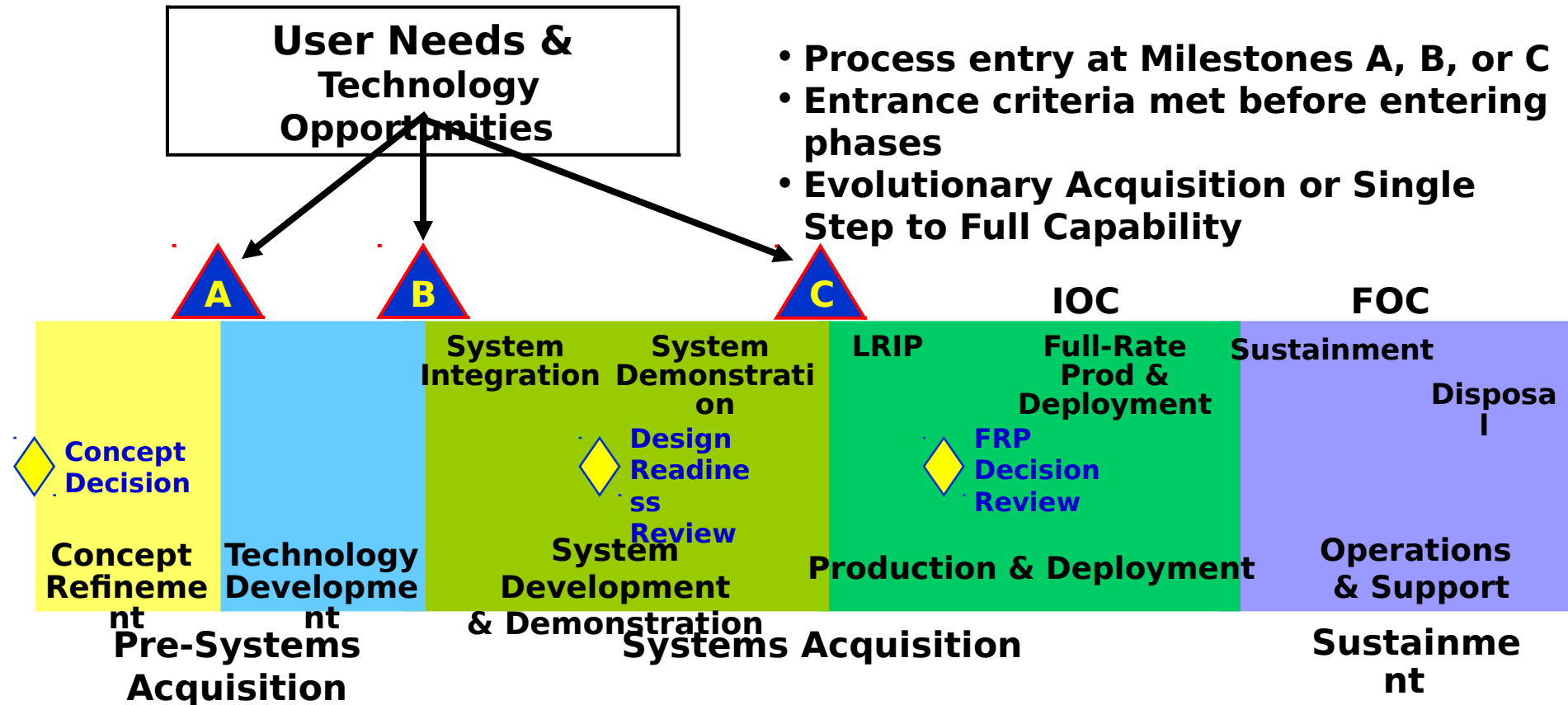- **Full Funding**

14

Each EA Increment Must Have...

- **Milestone B & C**
  - Capabilities Development & Production Document (CDD/CPD)
  - Performance, Cost and Schedule Goals (Acquisition Program Baseline)
  - Operational and Live Fire Testing (If Required)
  - Compliance with Acquisition Oversight Requirements
  - Acquisition Strategy that reflects consideration of:
    - Logistics Planning;
    - Manpower, Personnel and Training;
    - Environmental and Security Factors;
    - Protection of Critical Program Information;
    - Spectrum Management
    - Other information tailored to the conditions of the program

Increments are Related, but Separate Acquisitions

The Defense Acquisition Management Framework

User Needs & Technology Opportunities

- **Process entry at Milestones A, B, or C**
- **Entrance criteria met before entering phases**
- **Evolutionary Acquisition or Single Step to Full Capability**

A　　**B**　　**C**　　**IOC**　　**FOC**

| | | System Integration | System Demonstration | LRIP | Full-Rate Prod & Deployment | Sustainment |

Concept Decision

Design Readiness Review

FRP Decision Review

Disposal

| Concept Refinement | Technology Development | System Development & Demonstration | | Production & Deployment | Operations & Support |

Pre-Systems Acquisition　　**Systems Acquisition**　　**Sustainment**

The Defense Acquisition Management Framework
DoDI 5000.2, May 2003

A

B

Concept Refinement
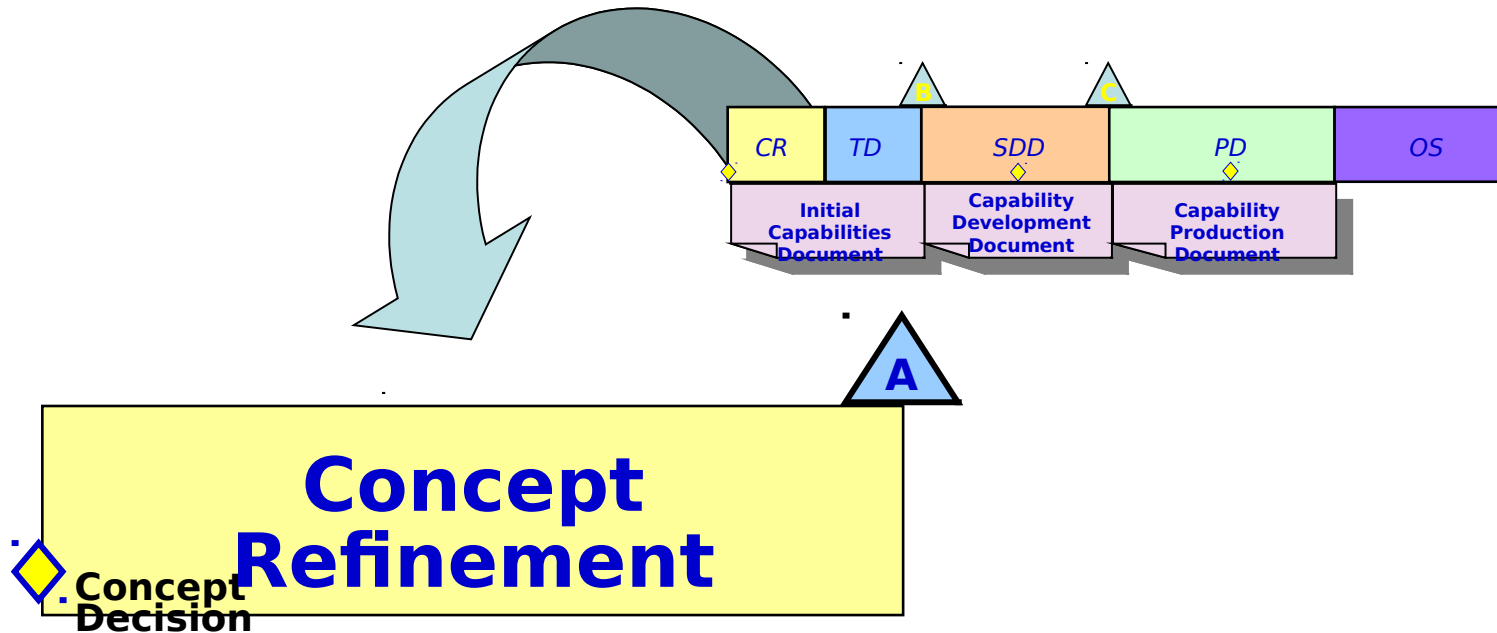
Technology Development
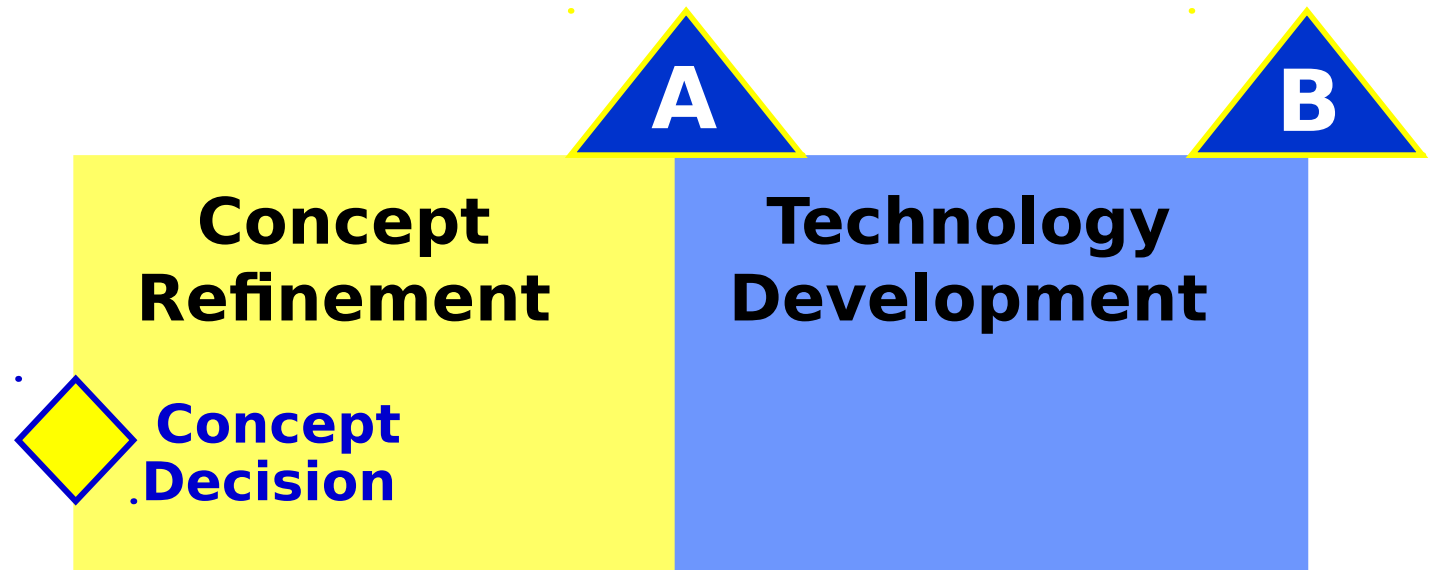
◆ **Concept Decision**

# Pre-Systems Acquisition

Most impact –

- **Concept & Technology Development now two distinct phases**

- **Concept Decision new decision point driven by Joint Staff requirements for "capabilities analysis"**

- **Analysis of Alternatives due at Milestone A**

Concept Refinement

CR	TD	SDD	PD	OS

B   C

Initial Capabilities Document

Capability Development Document

Capability Production Document

A

Concept Refinement

◇ **Concept Decision**

- **<u>Purpose</u>. Refine the initial concept and develop a Technology Development Strategy (TDS)**

- **<u>Entrance Criteria</u>. Approved Initial Capabilities Document (ICD); approved plan for conducting an analysis of alternatives (AoA); phase funding**

- **<u>Exit</u> . MDA-approved preferred solution and TDS**
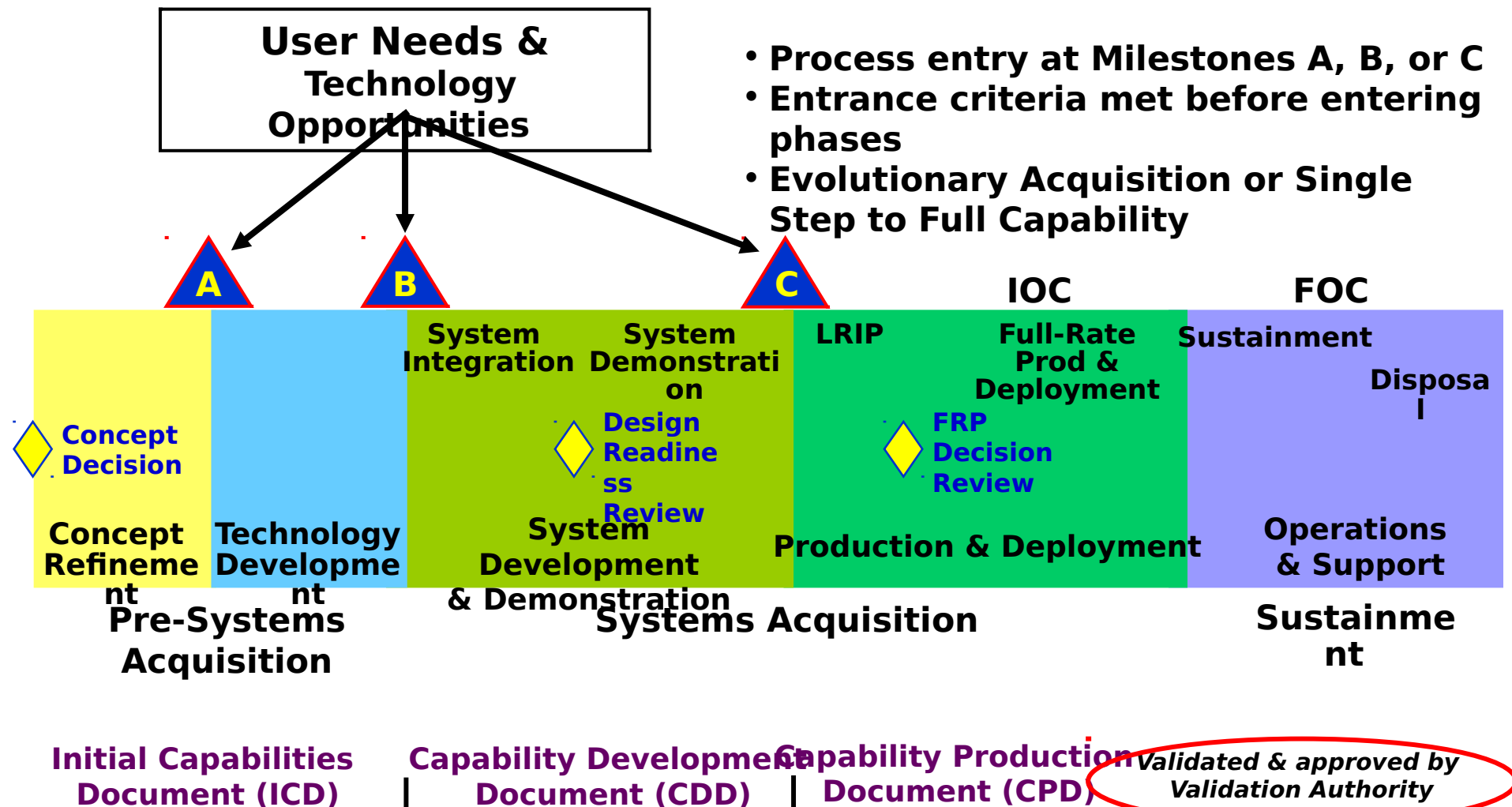
18

Technology Development
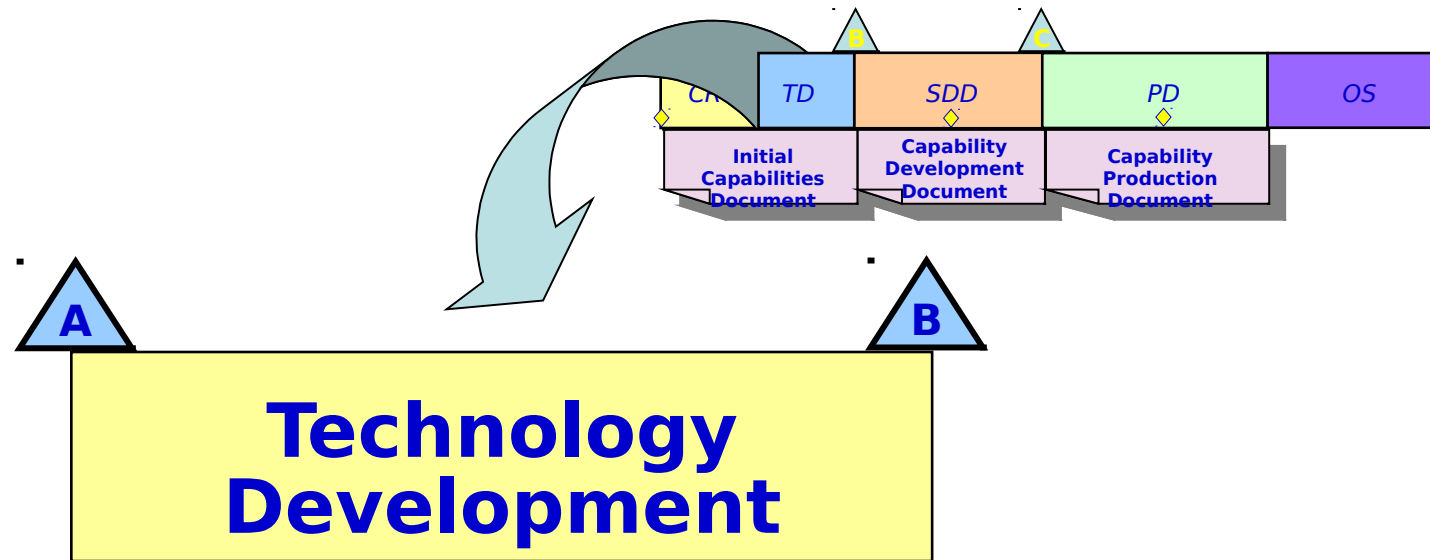
- **Purpose**. Reduce technology risk; determine the appropriate technologies to be integrated into a full system

- **Entrance criteria** . MDA - approved Technology Development Strategy TDS; phase funding

- **Exit** . Affordable increment of militarily – useful capability with technology demonstrated in a relevant environment, and a system that can be developed for production within a short timeframe.
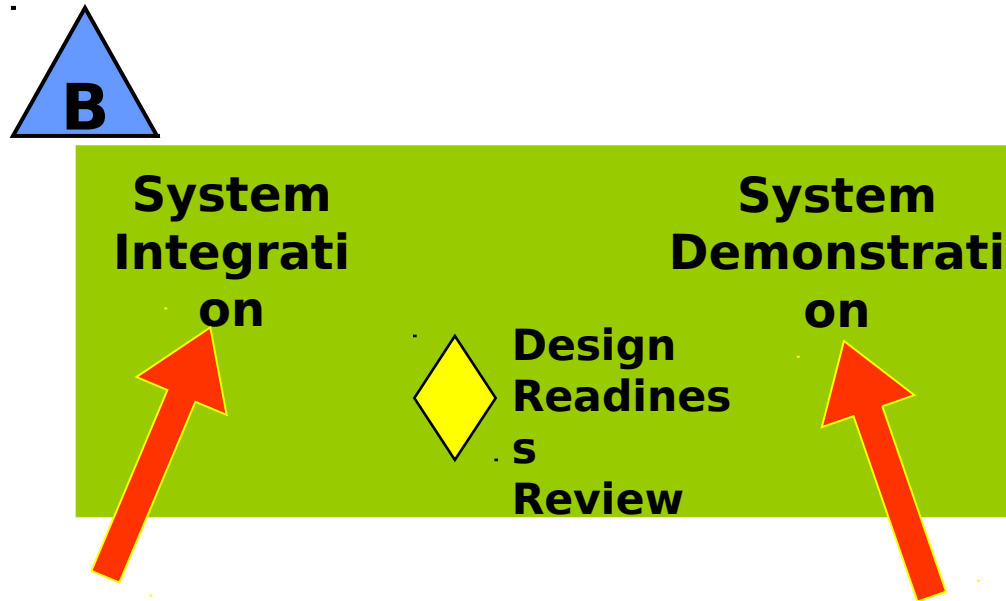
19

Technology Development Strategy (TDS)

- **ACAT I and IA require TDS. Based on AoA results**
- **Contents:**
  - **Rationale for EA or single-step strategy**
  - **For EA, description of how program will be divided into technology spirals & development increments**
  - **Appropriate limits on prototypes produced and deployed during the TD Phase**
  - **Performance Goals and Exit Criteria to be met prior to proceeding into SDD and producing additional prototypes**
  - **Overall cost, schedule and performance goals for the total R&D effort**
  - **Specific cost, schedule and performance goals and exit criteria for the first technology spiral**

The Defense Acquisition Management Framework

User Needs & Technology Opportunities

- Process entry at Milestones A, B, or C
- Entrance criteria met before entering phases
- Evolutionary Acquisition or Single Step to Full Capability

A   **B**   **C**   **IOC**   **FOC**

		System Integration	System Demonstration	LRIP	Full-Rate Prod & Deployment	Sustainment

Concept Decision

Design Readiness Review

FRP Decision Review

Disposal

Concept Refinement   **Technology Development**   **System Development & Demonstration**   **Production & Deployment**   **Operations & Support**

Pre-Systems Acquisition   **Systems Acquisition**   **Sustainment**

Initial Capabilities Document (ICD)   **Capability Development Document (CDD)**   **Capability Production Document (CPD)**   *Validated & approved by Validation Authority*

Relationship to Joint Capabilities Integration & Development System

System Development & Demonstration

B

System Integration

System Demonstration

Design Readiness Review

System Integration

Enter: PM has technical solution but has not integrated subsystems into complete system; approved CDD

Activities:

- System Integration of demonstrated subsystems and components
- Reduction of integration risk
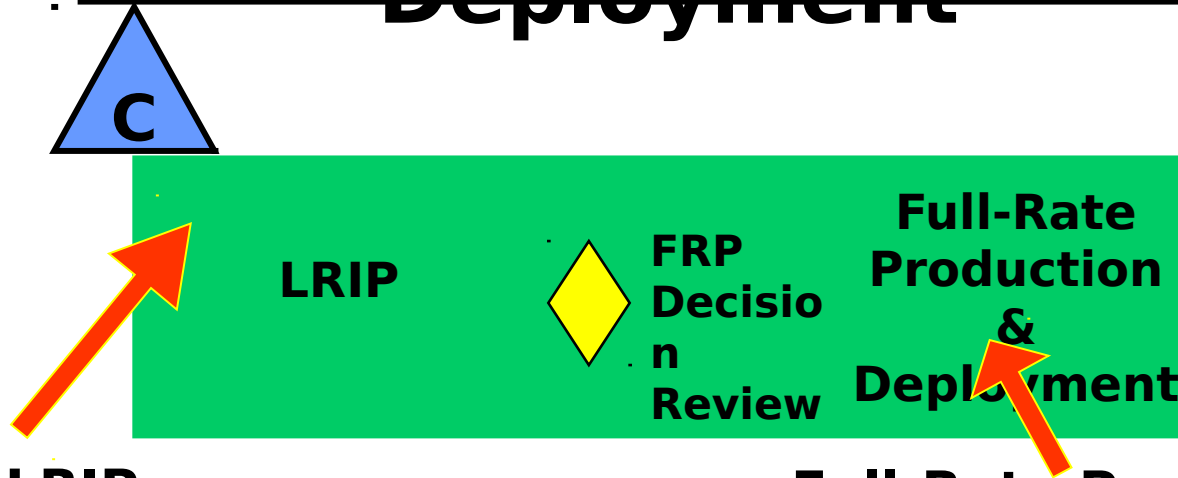- DT/EOA/preliminary LFT&E

System Demonstration

Enter: Prototypes demonstrated in intended environment

Activities:

- Complete system demonstration
- DT/OA/OT and preliminary LFT&E

Exit: System demonstration in intended environment using

Production & Deployment

C

LRIP

FRP Decision Review

Full-Rate Production & Deployment

LRIP

Enter: System matured for production, approved CPD

Activities:
- Low-rate initial production
- IOT&E
- Full-up systems level LFT&E of production-representative articles
- Establish full manufacturing capability

Exit: System operationally effective, suitable and ready for full rate production

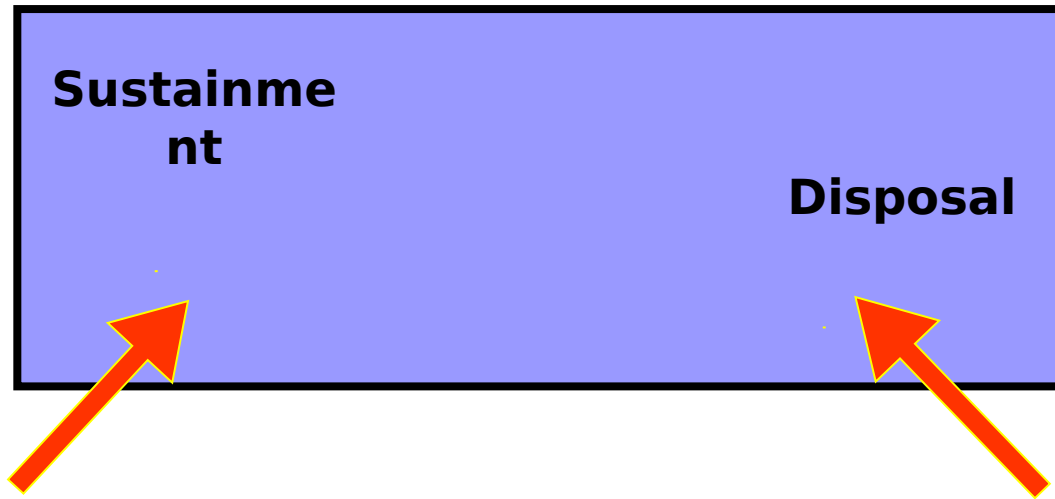## Full-Rate Production & Deployment

Enter:
- Demonstrated control of manufacturing process
- Satisfactory IOT&E: Beyond LRIP Report to Congress for ACAT I
- Full-up systems level LFT&E (covered systems) & report to Congress

Activities:
- Full rate production
- Deploy system
- Start support

Operations & Support

Sustainment

Disposal

Sustainment

Sustainment starts immediately upon fielding or deployment.
Activities:
- Maintain readiness and operational capability of deployed system(s)
- Execute operational support plans
- Conduct modifications and upgrades to hardware and software

Disposal

Demilitarization & Disposal Activities:
- Demilitarize and dispose of systems IAW legal and regulatory requirements, particularly environmental considerations
- Use Defense Reutilization and Marketing Office support, as appropriate

24

New/Revised from Previous Policy (DoDI 5000.2)

- Establishes Information Technology Acquisition Board (ITAB)
  - Previous MAISRC – DAB counterpart for MAIS programs)
- Designates "special interest" reason for ACAT designation
- Requires SAE (vice Developing Agency) to certify readiness for IOT&E for programs on the OSD T&E Oversight List
- Added procedures for oversight of acquisition of services
- Added new report: Software Resources Data Report

Defense Acquisition Management Framework
Key Points

- **Evolutionary acquisition is the preferred strategy for rapid acquisition of mature technology; spiral development is the preferred process**

- **MDA may authorize entry at any point consistent with phase-specific entrance criteria and statutory requirements**

- **Non-mandatory guidance on best practices, lessons learned and expectations are available in the Interim Guidebook (former DoD 5000.2-R)**

- **Requirements documents replaced by Capability documents (ICD, CDD, & CPD)**

Final Thoughts…..
Deliver Advanced Technology Faster

- **Improved integration of business practice**

- **Focus on Joint Capabilities**

- **Flexible, outcome-based, Acquisition Management Framework**

- **DoD Acquisition Guidebook in final draft**
  - **Go to http://dod5000.dau.mil for updates**

Improved Business Practices meet the 21ST Century Challenge

ADDITIONAL RESOURCES

- **DoD 5000 RESOURCE CENTER (http://dod5000.dau.mil)**
  - **Includes:**
    - **Joint Capabilities Integration and Development System (JCIDS)**
      - Instruction (CJCSI 3170.01C) and Manual (CJCSM 3170.01)
      - Overview Video (J-8)
      - JCIDS Brief
    - **Defense Acquisition System**
      - Directive (DODD 5000.1) and Instruction (DODI0 5000.2)
      - Overview Video (DPAP)
      - Summary Brief
      - Tutorial, Frequently Asked questions, Terminology
- **OSD PA&E Website (http://www.ra.pae.osd.mil/pr/index.htm)**